

Cook Children's

Dept of Neurosurgery

682-885-2500

Doctor: \_\_\_\_\_

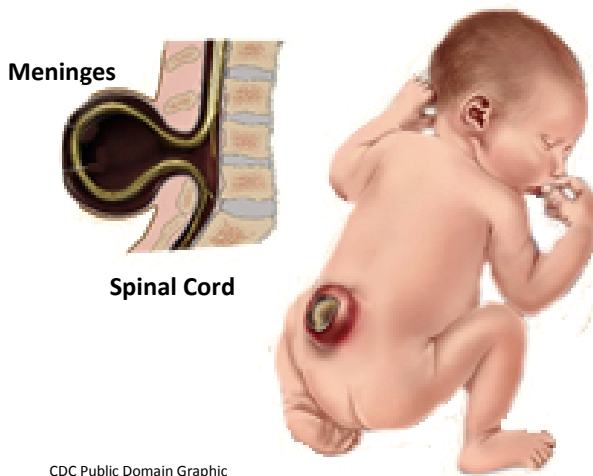
## Myelomeningocele

A neural tube defect found before or at birth.

Myelo: Spinal cord

Meninges: Membrane covering the brain and the spinal cord.

Meningocele: Protrusion of the meninges and spinal cord through a defect in the bony spine



### Myelomeningocele Early Diagnosis

We can see this defect on fetal ultrasound or MRI.

A myelomeningocele *may cause* associated problems in different areas of the body including:

- **Legs:** Decreased movement and control.
- **Bladder:** Decreased function with a need for bladder catheterizations.
- **Bowel:** Loss of control problems, including constipation.
- **Developmental problems**
- **Hydrocephalus/Chiari Malformation**

## Surgery to close Myelomeningocele

24 to 48 hours after birth

### Goal of Neurosurgery Team

- Close the opening in the spinal region.
- Monitor healing and skin following the closure.
- Evaluate the infant for signs of hydrocephalus.

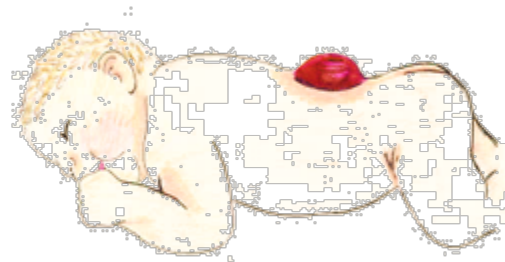
## Care after myelomeningocele surgery

**Positioning:** Very important for healing.

- Cannot lay on back for 7 to 14 days.
- Must lay flat on stomach or side.

**Incision:** No dressing.

- It is important for your neurosurgery team to watch this area for any leaking or infection.
- In NICU we will keep incision area open.
- Sutures: Sutures will dissolve in 4 to 6 weeks.
- Staples: May be used to close the defect.



**Diaper:** Your baby will *not* have a diaper. The NICU team use absorptive pads under your baby.

### Holding your baby

The NICU team will help you hold your baby. It is important to keep your baby flat.

### Discomfort

Your baby will have pain medicine available following the surgery.

## Bladder Catheterizations

Babies with myelomeningoceles often have problems emptying their bladder. An over-filled bladder can cause infections and kidney problems.

The NICU team will monitor your baby for wet diapers. It may be necessary to use a catheter to empty your baby's bladder.

We may need to catheterize your baby several times a day. Your NICU team will adjust the times according to your baby's needs.

## Cerebrospinal Fluid (CSF)

CSF circulates around the brain and spinal cord.

CSF is a clear, watery fluid. CSF is continuously made in the spaces of the brain called ventricles.

- CSF flows out of the ventricles and circulates around the brain and spinal cord.
- The blood vessels of the brain reabsorb CSF into the bloodstream.
- Repairing the myelomeningocele disrupts the usual pathway of CSF.

## Hydrocephalus

CSF can build up in ventricles

When the usual pathway of CSF is disrupted, CSF can build up inside the ventricles.

- This causes the ventricles and your baby's head to enlarge.
- Enlarged ventricles increase pressure inside the brain. This is called hydrocephalus.

Hydrocephalus occurs in up to 80% of babies with myelomeningoceles.

**Problem:** If left untreated, the increased fluid in the ventricles will start placing pressure on the delicate brain tissue and cause serious health problems, even death.

**Head ultrasound:** Helps to evaluate the size of your baby's ventricles.

## Shunt

Most common treatment for hydrocephalus

Shunt is a small tube. We place one end in the ventricles to drain off excess CSF.

- We place the other end of the tubing down into an area of the body where the CSF is absorbed.
- The Neurosurgery team will discuss the shunt procedure with you before surgery.



Normal ventricles



Enlarged ventricles

## Before You Go Home

1. **Follow-up Appointments:** We will schedule all follow-up appointments before you go home.
2. **Catheterizations:** We will teach you how to perform bladder catheterizations and when to follow-up with the Urology team.
3. **Incision Care:** We will discuss the care of the surgical incision, including when you can bathe your baby and what to watch for.
4. **Shunt Complications:** If your baby needs a shunt, we will give you specific information on caring for your baby following shunt surgery.

These instructions are only general guidelines. Your surgeon may give you special instructions. If you have any questions or concerns, please ask a member of the Neurosurgery team.

# Myelomeningocele

\_\_\_\_\_  
Patient Name

\_\_\_\_\_  
MRN (Medical Record Number)

The healthcare provider talked to me about the information in this handout.

- I know what I need to do.
- I know why doing this is important.
- All my questions have been answered.
- I have a copy of this handout.

## Patient, Parent, or Legally Authorized Representative

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signed Name

\_\_\_\_\_  
Your Relationship to the Patient

\_\_\_\_\_  
Date

\_\_\_\_\_  
Time a.m. / p.m.

## Healthcare Provider

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signed Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Time a.m. / p.m.

## Interpreter

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signed Name

\_\_\_\_\_  
Interpreter Number

\_\_\_\_\_  
Date

\_\_\_\_\_  
Time a.m. / p.m.



Print or imprint Patient Information

MRN \_\_\_\_\_

CSN \_\_\_\_\_